

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see Form PCT/ISA/210 (sheet 2)

Applicant's or agent's file reference
see Form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2004/009002

International filing date (day/month/year)
12.08.2004

Priority date (day/month/year)
29.08.2003

International Patent Classification (IPC) or both national classification and IPC
H01R12/18, H01R9/24

Applicant
KRONE GMBH

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION


If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires earlier.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

10/569306
International Application No.
PCT/EP2004/009002

1P20060101/10 21 FEB 2006

Box No. 1. Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2004/009002

Box No. II. Priority

1. ☒ The following document has not yet been furnished:

☒ copy of the earlier application whose priority has been claimed (Rules 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rules 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Statement

Novelty	Yes:	Claims	1-9
	No:	Claims	
Inventive Step	Yes:	Claims	
	No:	Claims	1-4, 7, 8, 11, 12, 17-19
Industrial Applicability	Yes:	Claims	1-19
	No:	Claims	

2. Citations and explanations

Insert text here

1AP20 Rec'd PCT/PTO 21 FEB 2006

Re Point V.

1. The following documents are referred to in the following opinion:

D1: WO 01/97339 A (BUSSE RALF DIETER; STARK JOACHIM (DE); KLEIN HARALD (DE); KRONE GMBH) December 20, 2001 (2001-12-20)
D2: DE 201 20 690 U (WEIDMUELLER INTERFACE) February 13, 2003 (2003-02-13)
D3: EP-A-0 661 777 (WHITAKER CORP) July 5, 1995 (1995-07-05)
D4: US-A-3 662 321 (BURY ALLEN J) May 9, 1972 (1972-05-09)
D5: US-A-4 556 660 (ANSCHER JOSEPH ET AL) January 28, 1986 (1986-01-28)

2. INDEPENDENT CLAIM 1

- 2.1 The present application does not comply with the requirements of Article 33(1) PCT, because the subject matter of Claim 1 is not based on an inventive step in the sense of Article 33 (3) PCT.

The document **D1** is regarded as the closest prior art relating to the subject matter of Claim 1. This discloses (the references in brackets relate to this document): a distribution board connection module for telecommunications and data technology, having a housing (Figure 7: 21, 22) in which externally accessible input and output contacts (Figure 7: 4, 5) are arranged for connection of lines and conductors, with the housing being formed with a cavity in which at least one printed circuit board (Figure 7: 6) is arranged, with the input and output contacts being arranged on the same end faces of the housing, with the input contacts being in the form of at least one connecting strip (Figure 7: 32, 36) with insulation-displacement terminal contacts (Figure 7: 4), with the input and output contacts being detachably connected to the printed circuit board (Figure 7: 6), with the connecting strip (Figure 7: 32, 36, 4) to which the input contacts are fitted being detachably connectable via a front part (Figure 7: 22) to the housing (Figure 7: 21), with the insulation-displacement terminal contacts (4) being connected to the printed circuit board (6) via fork-shaped contacts (Figure 1: 9), and with the connection between the front part (22) and the housing (21) being designed in such a way that, when the connection is released, the connecting strip which is connected to the front part (22) is moved away from the printed circuit board (6) with the fork contacts (9).

The subject matter of claim 1 thus differs from the known distribution board connection module in that:

F1: the input and output contacts are arranged on opposite end faces of the housing.

The object to be achieved by the present invention can thus be regarded as being the provision of a distribution board connection module with an alternative geometry.

However, the feature **F1** relates only to one of a number of obvious options from which a person skilled in the art would choose appropriately for the circumstances without any inventive step in order to achieve the stated object. In particular, **D1** itself, with reference to the first exemplary embodiment in Figure 1, proposes an arrangement of input and output contacts on opposite

faces of a distribution board connection module with a printed circuit board fitted, such that the subject matter according to Claim 1 is obvious to a person skilled in the art just from **D1**.

- 2.2 Furthermore, the subject matter of Claim 1 is likewise obvious to a person skilled in the art from the teaching from the document **D2**, and is thus not based on an inventive step in the sense of Article 33(3) PCT.

The document **D2** discloses (the references in brackets relate to this document):

a distribution board connection module suitable for use for telecommunications and data technology having a housing (Figure 5: 2b, 38) in which externally accessible input and output contacts (Figure 5a: 6) are arranged for the connection of lines and conductors, with the housing being formed with a cavity in which at least one printed circuit board (Figure 5a: 14) is arranged, with the input and output contacts being arranged on the opposite end faces of the housing (with respect to the printed circuit board), with the input contacts being formed as at least one connecting strip (figure 7: 32, 36) with terminal contacts (Figure 7: 4), with the input and output contacts being detachably connected to the printed circuit board (Figure 5a: 14), with the connecting strip to which the input contacts are fitted being detachably connectable to the housing (Figure 5a: 2b) via a front part (Figure 5a: 2a), with the terminal contacts (6) being connected to the printed circuit board (14) via fork-shaped contacts (figure 5a: 27) and with the connection between the front part (2a) and the housing (2b) being designed such that, when the connection is released, the connecting strip which is connected to the front part (2a) is moved away from the printed circuit board (14) with the fork-shaped contacts (27).

The subject matter according to Claim 1 thus differs from this only in that, in the exemplary embodiment mentioned above from **D2** in Figures 5, 5a-c, terminal contacts are used to make contact with the conductors, instead of insulation-displacement terminal contacts. An alternative contact-making technique such as this is, however, generally known to those skilled in the art in the relevant field, and is thus not based on an inventive step (see, for example, **D1** or **D2** in conjunction with the exemplary embodiment in Figure 7, lines 22-27).

3. DEPENDENT CLAIMS 2-4, 7, 8, 11, 12, 17-19

The Claims 2-4, 7, 8, 11, 12, 17-19 contain no features which, in combination with the features of at least some of the claims to which they relate, satisfy the requirements of the PCT with regard to an inventive step:

- 3.1 The features of Claims 2 to 4 relate to the connection between the front part and the housing via a screw connection, with a screw which is fixed to the front part being screwed into a thread in the housing (Claim 2), in particular with the screw being fixed via a groove between the screw head and the thread on the front part (Claim 3), to be precise in particular in a captive form (Claim 4). In contrast, according to **D1**, the front part or the second housing part is connected to the housing (first housing part) by means of a latching connection. The use of a screw connection, in particular of a screw connection such as this in which the screw is held captive on the connecting part or the part to be removed (for example in a groove in the connecting part) relates to a minor physical change to the distribution board connecting module according to Claim 1, which is within the scope of what a person skilled in the art would do on the basis of the

considerations with which he is familiar, especially since the advantages achieved with this can readily be foreseen (see, for example, the connected parts in the documents **D3**, Figure 1, Ref. 52; **D4**, Figure 5, Ref. 118, 122). In consequence, the subject matters of Claims 2 to 4 are not based on any inventive step, either.

- 3.2 The preferred choice of metal as the material for the housing according to Claim 7 is likewise within the field of specialist routine. The subject matter according to Claim 7 is thus likewise not based on any inventive step.

The features according to Claim 8 likewise relate to simple structural measures to being a cover part, which is within the scope of what a person skilled in the art would do on the basis of the considerations with which he is familiar, especially since the advantages achieved with this can readily be foreseen, see, for example **D2**, Figure 5, Ref. 38.
In consequence, the subject matter of Claim 8 is not based on any inventive step, either.

- 3.3 **D1** likewise teaches the provision of ground contacts for the printed circuit board on the housing of the distribution board connection module (Claim 11) which, in particular, are formed from a sheet-metal part with lower and upper profile forks (Claim 12). **D1** (see in particular Figure 7 and page 11, lines 1-4) does not mention the specific design of the ground contacts. The formation of the ground contacts as spring contacts is, however, within the field of normal considerations of the relevant person skilled in the art, so that the subject matters of Claims 11 and 12 are likewise not based on any inventive step.
- 3.4 With regard to the feature of the cable guide which can be plugged in (Claim 17), document **D5** describes the same advantages as the present application. The person skilled in the art would thus regard the inclusion of this feature in the distribution board connection module described in **D1** as a normal design measure, so that the subject matter according to Claim 1 is likewise not based on any inventive step.
- 3.5 The advantages of the features of Claims 18 and 19 are likewise already evident to a person skilled in the art from **D1** on its own (Figures 6 and 7), so that the subject matters of these claims are not based on any inventive step, either.